5. (AS ONCE AMENDED) An optical transmission system, comprising:

a bi-directional transmission line including a first and second optical transmission lines; and

a plurality of Raman amplifiers positioned on the bi-directional transmission line, each of the Raman amplifiers using a plurality of pump lights to amplify optical signals on both of the first and second optical transmission lines so that when power of a first pump light, having a first wavelength, among the plurality of pump lights drops to at most a predetermined level in a first Raman amplifier among said plurality of Raman amplifiers, power of a second pump light having a wavelength adjacent to the first wavelength is raised in both a second Raman amplifier located next to the first Raman amplifier on a first side and a third Raman amplifier located next to the first Raman amplifier on a second side.

11. (AS ONCE AMENDED) The optical transmission system according to claim 4,

wherein each optical transmission line accommodates "m" optical fibers, and

wherein each of said Raman amplifiers includes a multiplexer multiplexing "m" pump lights having different wavelengths to provide a multiplexed pump light to each of the "m" optical fibers.

12. (AS ONCE AMENDED) The optical transmission system according to claim 4,

wherein each optical transmission line accommodates "m" optical fibers, and

wherein each of the Raman amplifiers comprises a multiplexer having "m" input ports and "m" output ports, each of the "m" input ports receiving a polarization-coupled light, obtained by polarization-coupling two pump lights,, the multiplexer multiplexes the polarization-coupled lights input via the "m" input ports, and providing a multiplexed light to the "m" optical fibers.

13. (AS ONCE AMENDED) The optical transmission system according to claim 4,

wherein each of the Raman amplifiers comprises a multiplexer multiplexing a plurality of pump lights, and providing a multiplexed pump light to said optical transmission line, and

wherein said optical transmission system uses a plurality of multiplexers selected and arranged so that an average of at least one characteristic of the multiplexers in a predetermined number of Raman amplifiers has a predetermined value in each group of the

predetermined number of Raman amplifiers and the power of the pump lights is raised in the predetermined number of Raman amplifiers.

15. (AS ONCE AMENDED) An optical transmission method with which a plurality of Raman amplifiers are positioned on a bi-directional optical transmission line between a first optical terminal station and a second optical terminal station, each of the Raman amplifiers using a plurality of pump lights, comprising:

determining power of each of the pump lights in the Raman amplifiers at the first optical terminal station;

transmitting, when power of a first pump light, having a first wavelength, among the pump lights drops to at most a predetermined level in a first Raman amplifier among the Raman amplifiers, a control signal for raising power of a second pump light having a wavelength substantially equal to the first wavelength, from the first optical terminal station to at least one of the Raman amplifiers on each side of the first Raman amplifier; and

adjusting the second pump light in accordance with the control signal in the at least one of the Raman amplifiers on each side of the first Raman amplifier.

16. (AS ONCE AMENDED) An optical transmission method with which a plurality of Raman amplifiers are positioned on a bi-directional optical transmission line between a first optical terminal station and a second optical terminal station, each of the Raman amplifiers using a plurality of pump lights, comprising:

determining power of each of the pump lights in the Raman amplifiers at the first optical terminal station;

transmitting, when power of a first pump light, having a first wavelength, among the pump lights drops to at most a predetermined level in a first Raman amplifier among the Raman amplifiers, a control signal for raising power of a second pump light having a wavelength adjacent to the first wavelength, from the first optical terminal station to the first Raman amplifier; and

adjusting the second pump light in accordance with the control signal in the first Raman amplifier.

REMARKS

In the November 22, 2002 Office Action, the Examiner noted that claims 4, 5, 11-13, 15 and 16 were pending in the application; required correction of Figs. 1-3; rejected claims 13, 15 and 16 under the second paragraph of 35 USC § 112; rejected claims 4, 5 and 13 under 35